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Jc796 U.S. PTO

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A/Reissue

## REISSUE PATENT APPLICATION TRANSMITTAL

PTO  
09/884759

06/18/01

Address to:

Commissioner for Patents  
Box Patent Application  
Washington, DC 20231

Attorney Docket No.

D/89194R

First Named Inventor

Dan S. Bloomberg

Original Patent Number

6,076,738

Original Patent Issue  
Date (Month/Day/Year)

06/20/2000

Express Mail Label No.

EE644214726US

## APPLICATION FOR REISSUE OF:

(check applicable box)



Utility Patent



Design Patent



Plant Patent

## APPLICATION ELEMENTS

## ACCOMPANYING APPLICATION PARTS

1. ☒ \* Fee Transmittal Form (PTO/SB/56)  
(Submit an original, and a duplicate for fee processing)2. ☒ Specification and Claims (Total Pages: 15)  
(amended, if appropriate)3. ☒ Drawing(s) (Total Sheets: 16)  
(proposed amendments, if appropriate)4. ☒ Reissue Oath or Declaration (original or copy)  
(37 C.F.R. 1.175) (PTO/SB/51 or 52)

5. Original U.S. Patent

☐ Offer to Surrender Original Patent (37 C.F.R. 1.178)  
(PTO/SB/53 or PTO/SB/54)

or

☐ Ribbonded Original Patent Grant☐ Affidavit / Declaration of Loss (PTO/SB/55)

6. Original U. S. Patent currently assigned?

☒ Yes ☐ No

(If Yes, check applicable box(es))

☐ Written Consent of all Assignees (PTO/SB/53 or 54)☐ 37 C.F.R. 3.73(b) Statement ☐ Power of Attorney7. ☐ Foreign Priority Claim (35 U.S.C. 119)  
(if applicable)8. ☐ Information Disclosure  
Statement (IDS)/PTO-1449☐ Copies of IDS  
Citations9. ☐ English Translation of Reissue Oath/Declaration  
(if applicable)10. ☐ \* Small Entity  
Statement(s)  
(PTO/SB/09-12)☐ Statement filed in prior application,  
Status still proper and desired11. ☐ Preliminary Amendment12. ☒ Return Receipt Postcard (MPEP 503)  
(Should be specifically itemized)13. ☒ Other: Status and Support for New Claims - 37 CFR 1.173(c)\*NOTE FOR ITEMS 1 & 10: IN ORDER TO BE ENTITLED TO PAY  
SMALL ENTITY FEES, A SMALL ENTITY STATEMENT IS REQUIRED  
(37 C.F.R. 1.27), EXCEPT IF ONE FILED IN A PRIOR APPLICATION  
IS RELIED UPON (37 C.F.R. 1.28).

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06/18/01  
 35796 U.S. PTO

<b>REISSUE APPLICATION FEE TRANSMITTAL FORM</b>					Attorney Docket Number: D/89194R			
<b>Claims as Filed – Part 1</b>								
Claims in Patent	For	Number Filed in Reissue Application	(3) Number Extra	Small Entity		Other than a Small Entity		
				Rate	Fee	Rate	Fee	
(A) 8	Total Claims (37 CFR 1.16(j))	(B) 28	**** 8 =	x \$	= \$	or	x \$ 18.00 =	\$ 144.00
(C) 2	Independent Claims (37 CFR 1.16(i))	(D) 5	* 2 =	x \$	= \$		x \$ 80.00 =	\$ 160.00
Basic Fee (37 CFR 1.16(h))					\$			
Total Filing Fee					\$		OR	
							\$ 710.00	
							\$ 1,014.00	
<b>Claims as Amended – Part 2</b>								
	(1) Claims Remaining After Amendment		(2) Highest Number Previously Paid For	(3) Extra Claims Present	Small Entity		Other than a Small Entity	
					Rate	Fee	Rate	Fee
Total Claims (37 CFR 1.16(j))	***	MINUS	**	=	x \$	= \$	or	x \$ = \$
Independent Claims (37 CFR 1.16(i))	***	MINUS	*****	=	x \$	= \$		x \$ = \$
Total Additional Fee					\$		OR	
							\$	
<p>* If the entry in (D) is less than the entry in (C), Write "0" in column 3.          ** If the "Highest Number of Total Claims Previously Paid For" is less than 20, Write "20" in this space.          *** After any cancellation of claims          **** If "A" is greater than 20, use (B-A); if "A" is 20 or less, use (B-20).          ***** "Highest Number of Independent Claims Previously Paid For" or Number of Independent Claims in Patent (C).</p> <p><input checked="" type="checkbox"/> Please charge Deposit Account No. 24-0025 in the amount of \$1,014.00.          A duplicate copy of this sheet is enclosed.</p> <p><input checked="" type="checkbox"/> The Commissioner is hereby authorized to charge any additional fees under 37 CFR 1.16 or 1.17 which may be required, or credit any overpayment to Deposit Account No. .          A duplicate copy of this sheet is enclosed.</p> <p><input type="checkbox"/> A check in the amount of \$                      to cover the filing / additional fee is enclosed.</p>								
Xerox Corporation El Segundo, California Date: 6/18/2001				 Jeannette M. Walder Attorney for Applicant(s) Registration No. 30,698 Telephone: 310.333.3660				

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Application of: Dan S. Bloomberg et al.	)	
	)	Group No.: Not assigned
reissue Application for US Patent. No. 6,076,738	)	
	)	Examiner: Not assigned
Issued: June 20, 2000	)	
	)	
For: SELF CLOCKING GLYPH CODES	)	

Commissioner for Patents  
Washington, D.C. 20231

**STATUS AND SUPPORT FOR NEW CLAIMS - 37 CFR 1.173(c)**

Sir:

Claims 1-8 are the original issued claims in US Patent 6,076,738. No changes are being made to claims 1-8. New claims 9-28 are being added in this reissue application. For the Examiner's convenience all claims are shown below.

1. A method for storing digital values of predetermined bit length,  $n$ , in a machine readable format on a hardcopy recording medium, said method comprising the steps of:

encoding each of said digital values in a corresponding one of  $2^n$  physically distinct, distinctive, rotationally variant, substantially equal surface area, individually discriminable glyph shapes to generate a set of mutually independent glyph shapes that vary in accordance with said digital values; and

writing said set of glyph shapes on said recording medium in a predetermined logical order and in accordance with a predetermined spatial formatting pattern for storing said digital values in a self-clocking code.

2. The method of claim 1 wherein said digital values are single bit values, and

said glyph shapes are elongated along axes that are tilted at angles of approximately plus and minus  $45^\circ$  with respect to a reference axis for distinguishing different ones of said digital values from each other.

3. The method of claim 2 wherein said reference axis extends substantially horizontally with respect to said recording medium.

4. A method for storing digital values of predetermined bit length,  $n$ , in a machine readable format on a hardcopy recording medium, said method comprising the steps of:

encoding each of said digital values in a corresponding one of  $2^n$  physically distinct, distinctive, rotationally invariant, substantially equal surface area, individually discriminable glyph shapes to generate a set of mutually independent glyph shapes that vary in accordance with said digital values; and

writing said set of glyph shapes on said recording medium in a predetermined logical order and in accordance with a predetermined spatial formatting pattern for storing said digital values in a self-clocking code.

5. The method of any of claims 1-4 wherein said glyph shapes are defined by respective two dimensional pixel arrays of predetermined size, each of which contains a predetermined number of ON pixels and a predetermined number of OFF pixels, and said spatial pattern is spatially periodic.

6. The method of claim 5 wherein said pixel arrays are written on said recording medium in spatially abutting relationship, such that said code has a generally uniform, textured appearance.

7. The method of any of claims 1-4 wherein said glyph shapes are of substantially uniform macroscopic appearance, and said spatial pattern is spatially periodic.

8. The method of claim 7 wherein said glyph shapes are written on said recording medium at a sufficiently high spatial density to impart a generally uniform, textured appearance to said code.

9. (New) A method for storing digital values of predetermined bit length,  $n$ , in a machine readable format on a hardcopy recording medium, said method comprising:

encoding each of said digital values in a corresponding one of  $2^n$  physically distinct, distinctive, substantially equal surface area, individually discriminable glyph shapes to generate a set of mutually independent glyph shapes that vary in accordance with said digital values; and writing said set of glyph shapes on said recording medium in a predetermined logical order and in accordance with a predetermined spatial formatting pattern for storing said digital values in a self-clocking code.

10. (New) The method of claim 9, wherein said glyph shapes are defined by respective two dimensional pixel arrays of predetermined size, each of which contains a predetermined number of ON pixels and a predetermined number of OFF pixels, and said spatial pattern is spatially periodic.

11. (New) The method of claim 10, wherein said pixel arrays are written on said recording medium in spatially abutting relationship, such that said code has a generally uniform, textured appearance.

12. (New) The method of claim 9, wherein said glyph shapes are of substantially uniform macroscopic appearance, and said spatial pattern is spatially periodic.

13. (New) The method of claim 12, wherein said glyph shapes are written on said recording medium at a sufficiently high spatial density to impart a generally uniform, textured appearance to said code.

14. (New) The method of claim 13, wherein said glyph shapes are of substantially uniform macroscopic appearance, and said spatial pattern is spatially periodic.

15. (New) A method for storing digital values of predetermined bit length,  $n$ , in a machine readable format on a hardcopy recording medium, said method comprising:

providing a hardcopy record, said hardcopy recording medium being encoded with a self-clocking code composed of spatially distributed glyphs that are written on said recording medium in a predetermined logical order in accordance with a predetermined spatial pattern for encoding digital values of predetermined bit length,  $n$ , in the respective glyphs, said glyphs conforming to selected ones of  $2^n$  physically distinct, distinctive, substantially equal surface area, individually discriminable glyph shapes; and

copying said machine readable code on said hardcopy recording medium onto another hardcopy recording medium.

16. (New) The method of claim 15, wherein said glyph shapes are rotationally variant.

17. (New) The method of claim 15, wherein said glyph shapes are rotationally invariant.

18. (New) The method of claim 15, wherein said glyph shapes are defined by respective two dimensional pixel arrays of predetermined size, each of which contains a predetermined number of ON pixels and a predetermined number of OFF pixels, and said spatial pattern is spatially periodic.

19. (New) The method of claim 18, wherein said pixel arrays are written on said recording medium in spatially abutting relationship, such that said code has a generally uniform, textured appearance.

20. (New) The method of claim 15, wherein said glyph shapes are of substantially uniform macroscopic appearance, and said spatial pattern is spatially periodic.

21. (New) The method of claim 20, wherein said glyph shapes are written on said recording medium at a sufficiently high spatial density to impart a generally uniform, textured appearance to said code.

22. (New) A glyph code reader, comprising:  
a scanner for scanning images on a hardcopy recording medium; and  
a processor for isolating a glyph code image from the scanned images, said glyph code image comprising glyph shapes storing digital values of predetermined bit length,  $n$ , in a machine readable format, in a self-clocking code, said glyph shapes being written on said recording medium in a predetermined logical order and in accordance with a predetermined spatial formatting pattern, each of said digital values being encoded in a corresponding one of  $2^n$  physically distinct, distinctive, substantially equal surface area, individually discriminable glyph shapes to generate a set of mutually independent glyph shapes that vary in accordance with said digital values, and for converting the glyph shapes into the digital values.

23. (New) The reader of claim 22, wherein said glyph shapes are rotationally variant.

24. (New) The reader of claim 22, wherein said glyph shapes are rotationally invariant.

25. (New) The reader of claim 22, wherein said glyph shapes are defined by respective two dimensional pixel arrays of predetermined size, each of which contains a predetermined number of ON pixels and a predetermined number of OFF pixels, and said spatial pattern is spatially periodic.

26. (New) The reader of claim 25, wherein said pixel arrays are written on said recording medium in spatially abutting relationship, such that said code has a generally uniform, textured appearance.

27. (New) The reader of claim 22, wherein said glyph shapes are of substantially uniform macroscopic appearance, and said spatial pattern is spatially periodic.

28. (New) The reader of claim 27, wherein said glyph shapes are written on said recording medium at a sufficiently high spatial density to impart a generally uniform, textured appearance to said code.

**Remarks**

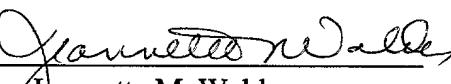
New claim 9 is directed to a method of storing digital values of predetermined bit length, n, in a machine readable format on a hardcopy recording medium. New claim 9 includes all of the language of claims 1 and 4 with the deletion of "rotationally variant" (claim 1) and "rotationally invariant" (claim 4). Rotationally variant and rotationally invariant glyph shapes are two species of a method of encoding of digital values on physically distinct, discriminable, mutually independent glyph shapes of substantially equal surface area. Claims 10-14 are dependent from claim 9 and include the language of original claims 5-8.

New claim 15 is directed to a method of storing digital values of predetermined bit length, n, in a machine readable format on a hardcopy recording medium and is similar to claim 9. Support for the copying element can be found with reference to Fig. 1. Claims 16 and 17 are dependent from claim 15 and are directed to the species of rotationally variant and rotationally invariant glyph shapes. Claims 18-21 are dependent from claim 15 and include the language of original claims 5-8.

New claim 22 is directed to a glyph code reader and includes the limitations of claim 9. Support for the reader elements can be found with reference to Fig. 10. Claims 23 and 24 are dependent from claim 22 and are directed to the species of rotationally variant and rotationally invariant glyph shapes. Claims 25-28 are dependent from claim 22 and include the language of original claims 5-8.

Consideration of this reissue application and allowance thereof are earnestly solicited. In the event the Examiner considers a personal contact advantageous to the disposition of this case, the Examiner is requested to call the undersigned Attorney for Applicants, Jeannette Walder.

Respectfully submitted,

By:   
 Jeannette M. Walder  
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 Attorney for Applicants  
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Xerox Corporation  
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 Date: June 18, 2001